

This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

Claim 1. (Currently amended) An assay for determining the cyclooxygenase- 2 activity ~~of a sample~~ of a composition comprising a human osteosarcoma cell preparation, a sample and arachidonic acid, the assay comprising the steps of:

(a) preparing the composition by adding

(1) ~~a~~ the human osteosarcoma cell preparation,

(2) ~~a~~ the sample, said sample comprising a putative cyclooxygenase-2 inhibitor,  
and

(3) the arachidonic acid; and

(b) determining the amount of prostaglandin E<sub>2</sub> produced in step (a).

Claim 2. (Currently amended) An assay ~~for determining the cyclooxygenase-2 activity of a sample according to claim 1 comprising the steps of:~~

~~—— (a) adding~~

~~—— (1) a human osteosarcoma cell preparation,~~

~~—— (2) a sample, said sample comprising a putative cyclooxygenase-2 inhibitor, and~~

~~—— (3) arachidonic acid; and~~

~~—— (b) determining the amount of prostaglandin E<sub>2</sub> produced in step (a),~~

wherein the cell preparation comprises  $10^3$  to  $10^9$  whole cells of osteosarcoma per cc, or 50 to 500 ug of osteosarcoma microsomes per ml of preparation; and 0.1 to 50  $\mu$ l of arachidonic acid per ml of preparation.

Claim 3. (Currently amended) An assay for determining the cyclooxygenase-2 activity of ~~a sample~~ a composition comprising a human osteosarcoma cell preparation, a sample and arachidonic acid, the assay comprising the steps of:

(a) preparing the composition by adding

(1) a the human osteosarcoma cell preparation,

(2) a the sample, said sample comprising a putative cyclooxygenase-2 inhibitor,

and

(3) the arachidonic acid; and

(b) determining the amount of prostaglandin E<sub>2</sub> produced in step (a)

(c) correlating the amount of prostaglandin E<sub>2</sub> produced with cyclooxygenase-2 activity,

wherein the osteosarcoma cell preparation consists essentially of osteosarcoma 143.98.2 microsomes.

Claim 4. (Original) An assay according to claim 3 wherein the osteosarcoma 143.98.2 microsomes are substantially free of endogenous arachidonic acid.

Claim 5. (Original) An assay according to claim 3 wherein the microsomes are contacted with an amount of delipidized serum protein effective to reduce the amount of endogenous arachidonic acid in the microsomes by a factor of at least approximately 2.

Claim 6. (Currently amended) An assay for determining the cyclooxygenase-2 activity of ~~a sample~~ a composition comprising a human osteosarcoma cell preparation, a sample and arachidonic acid, the assay comprising the steps of:

(a) preparing the composition by adding

(1) a the human osteosarcoma cell preparation,

(2) a the sample, said sample comprising a putative cyclooxygenase-2 inhibitor,  
and

(3) the arachidonic acid; and

(b) determining the amount of prostaglandin E<sub>2</sub> produced in step (a),

(c) correlating the amount of prostaglandin E<sub>2</sub> produced with cyclooxygenase-2 activity,

wherein the human osteosarcoma cell preparation contains no recombinant vector.

Claim 7. (Currently amended) An assay for determining the cyclooxygenase-2 activity of ~~a sample~~ a composition comprising a human osteosarcoma cell preparation, a sample and arachidonic acid, the assay comprising the steps of:

(a) preparing the composition by adding

(1) a the human osteosarcoma cell preparation,

(2) a the sample, said sample comprising a putative cyclooxygenase-2 inhibitor,  
and

(3) the arachidonic acid; and

(b) determining the amount of prostaglandin E<sub>2</sub> produced in step (a)

(c) correlating the amount of prostaglandin E<sub>2</sub> produced with cyclooxygenase-2 activity,

wherein the osteosarcoma cell preparation consists essentially of whole cells of osteosarcoma  
143.98.2.

Claim 8. (Canceled).

Claim 9. (Previously amended) A composition comprising:

(a) an osteosarcoma cell preparation having  $8 \times 10^4$  to  $2 \times 10^6$  osteosarcoma 143.98.2 whole cells per cc of cell preparation or 100 to 400  $\mu\text{g}$  of osteosarcoma 143.98.2 microsomes; and 10 to 20  $\mu\text{l}$  of peroxide-free arachidonic acid per cc of cell preparation; and

(b) 0.1 to 50  $\mu\text{l}$  of arachidonic acid per cc of cell preparation.

Claim 10. (Original) A composition according to claim 9 wherein the microsomes are substantially free of endogenous arachidonic acid.

Claim 11. (Currently amended) An assay for determining the cyclooxygenase-1 activity of a sample a composition comprising the steps of:

(a) preparing the composition adding

(1) a the COX-1 cell preparation,

(2) a the sample, said sample comprising a putative cyclooxygenase-1 inhibitor;

(3) the arachidonic acid; and

(b) determining the amount of prostaglandin  $\text{E}_2$  produced in step (a)

(c) correlating the amount of prostaglandin  $\text{E}_2$  produced with cyclooxygenase-2 activity.

Claim 12. (Original) An assay according to claim 11 wherein the COX-1 cell preparation consists essentially of whole cells of U-937.

Claim 13. (Original) An assay according to claim 11 wherein the COX-1 cell preparation consists essentially of U-937 microsomes.

Claim 14. (Currently amended) An assay according to claim 11 ~~for determining the cyclooxygenase-1 activity of a sample comprising the steps of:~~

~~\_\_\_\_\_ (a) adding~~

~~\_\_\_\_\_ (1) a COX-1 cell preparation;~~

~~\_\_\_\_\_ (2) a sample, said sample comprising a putative cyclooxygenase-1 inhibitor;~~

~~\_\_\_\_\_ (3) arachidonic acid; and~~

~~\_\_\_\_\_ (b) determining the amount of prostaglandin E<sub>2</sub> produced in step (a);~~

wherein the cell preparation comprises  $10^5$  to  $10^8$  whole cells of U-937 per cc, or 1 to 10 mg of U-937 microsomes per ml of preparation; and

0.1 to 50  $\mu$ l of arachidonic acid per ml of preparation.

Claim 15. (Original) An assay according to claim 14 wherein the cell preparation comprises  $8 \times 10^8$  to  $1.5 \times 10^6$  whole cells of U-937 per cc, or 1 to 5 mg of U-937 microsomes per ml of preparation.

Claims 16 to 18 (Canceled)

Claim 19. (Currently amended) A transformed host cell that expresses cyclooxygenase-2 as shown in SEQ. ID. NO: 10 comprising:

(a) a mammalian or eukaryotic expression vector; and

(b) a sequence encoding human cyclooxygenase-2 comprising bases 97 to 1909 of as shown in FIG. 2 (SEQ. ID. NO: 11) or encodes protein of FIG. 1 (SEQ. ID. NO: 10).

Claims 20 to 21 (Canceled).

Claim 22. (Previously amended) Human cyclooxygenase-2 cDNA comprising the coding region which is bases 97 to 1909 of SEQ. ID. NO: 11.

Claim 23. (Previously amended) Recombinant human cyclooxygenase-2 which is shown in SEQ. ID. NO: 10.

Claim 24. (Previously amended) An isolated human cyclooxygenase-2 which is shown in SEQ. ID. NO: 10.

Claim 25. (Previously amended) Purified human cyclooxygenase-2 which is shown in SEQ. ID. NO: 10.

Claim 26. (Previously amended) The transformed host cell according to claim 19 wherein the expression vector is a vaccinia or baculovirus vector.

Claim 27. (Previously amended) The transformed host cell according to claim 19 wherein the cyclooxygenase-2 is expressed in COS-7 cells.